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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/259,361	02/26/1999	CLIFTON MALCOLM NOCK	RO998-203	5211

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EXAMINER	
LAO, SUE X	
ART UNIT	**PAPER NUMBER**
2126	7

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

Office Action Summary	Application No. 09/259,361	Applicant(s) Nock et al	
	Examiner S. Lao	Art Unit 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Apr 7, 2003* .

2a)☒ This action is **FINAL**. 2b)□ This action is non-final.

3)□ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above, claim(s) ______ is/are withdrawn from consideration.

5)□ Claim(s) ______ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)□ Claim(s) ______ is/are objected to.

8)□ Claims ______ are subject to restriction and/or election requirement.

Application Papers

9)□ The specification is objected to by the Examiner.

10)□ The drawing(s) filed on ______ is/are a)□ accepted or b)□ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)□ The proposed drawing correction filed on ______ is: a)□ approved b)□ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)□ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)□ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)□ All b)□ Some* c)□ None of:

1. □ Certified copies of the priority documents have been received.
2. □ Certified copies of the priority documents have been received in Application No. ______ .
3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14)□ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a)□ The translation of the foreign language provisional application has been received.

15)□ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) □ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) □ Information Disclosure Statement(s) (PTO-1449) Paper No(s). ______

4) □ Interview Summary (PTO-413) Paper No(s). ______

5) □ Notice of Informal Patent Application (PTO-152)

6) □ Other:

DETAILED ACTION

1. Claims 1-20 are pending. This action is in response to the amendment filed 4/7/2003. Applicant has amended claims 1, 7, 8, 11, 13, 15 and 16.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-7, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Borst et al (WO 98/02813) in view of JDK 1.1 (Java Object Serialization Specification, Revision 1.3, JDK 1.1).

As to claim 16, Borst teaches (page 11, line 5 to page 14, line 31; page 19, line 12 to page 20, line 9 and page 22, lines 22-29) datastream factory that create (Factory interface, TransportFactory interface), datastream class instance (Stream object, TransportStream object), datastream receive mechanism (Get and Put operations), populate (write data to a stream), at least one object method (Get and Put operations). The device of Borst inherently has a signal bearing media.

While Borst uses an identifier (object reference) to identify a stream object created by a Factory such that all subsequent stream operations must be addressed to this object (page 11, line 5 to page 14, line 31; page 19, line 12 to page 20, line 9 and page 22, lines 22-29), Borst does not teach that the identifier corresponds to a received data stream, nor the information used to populate the stream object created by the Factory is the information contained in the received datastream.

JDK teaches (sections 1.2 and 1.3) datastream objects and datastream receive mechanism / operations (read from an object stream, readObject()), wherein a newly created datastream object (ObjectInputStream 's') corresponds to an identifier ('in') in a received datastream (InputStream/FileInputStream) such that the received datastream serves as the source datastream for populating (read from the InputStream) (page 3, section 1.3). It is noted that the datastream receive mechanism of JDK (readObject()) is defined in a parent datastream class (ObjectInput class which extends DataInput class) [See section 1.6], and it causes the newly created datastream object ('s') to populate itself by invoking the object's own method s.readObject() [see section 1.3].

Given the teaching of JDK, it would have been obvious to allow the datastream factory of Borst to use the identifier corresponding to an identifier in a received datastream and allow the populating to use information contained in the received datastream in a self-populating manner.

The motivations to combine the teachings of Borst and JDK include the following. Borst desires validity/security checking during stream operations (paragraph bridging pages 22 and 23) but does not provide a mechanism to do so. JDK on the other hand, provides a mechanism for implementing validity/security checking during stream operations (pages 43-46). Therefore, one of ordinary skill in the art would have been motivated to use the mechanism of JDK to perform validity/security checking in Borst.

As to claim 17, Borst teaches recordable media (disk subsystem 43).

As to claim 18, Borst teaches transmission media (network connections 51, 53).

As to claim 19, Borst teaches datastream processing mechanism (Get, Put, Destroy and Cancel operations, page 12, lines 22-23).

As to claim 20, Borst teaches datastream send mechanism (Put operation).

As to claim 1, note the rejection of claim 16 above. Claim 1 additional recites processor, memory and second computer system. Borst teaches processor (CPU 45, 85), memory (memory 44, 84) and second computer system (client computer, server computer, gateways, pages 6, 7, 24). Borst also teaches "Streaming can occur in both directions" (page 27, line 27). The combined teaching of Borst and JDK would have provided that the received datastream is one received from a second computer system.

As to claim 2, note the rejection of claim 19 above.

As to claim 3, note the rejection of claim 20 above.

As to claim 4, it is covered by claim 1 (datastream receive mechanism ... executed by).

As to claim 5, note the rejection of claim 19 above.

As to claim 6, note the rejection of claim 3 above.

As to claim 7, it is covered by claim 1 except for the first and second computers, network connection, and active datastream. Borst teaches first and second computers (multiple computers, pages 6-7) and network connection (path, page 19, lines 20-30; socket, page 22, lines 22-29). Note the received datastream of claim 1 is an active datastream since it is sent and processed.

4. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Borst et al in view of JDK 1.1 as applied to claims 1-7, 16-20 and further in view of Sosic ("Dynascope: A Tool for Program Directing").

As to claim 8, note the rejection of claim 1 for means' for creating and populating. Borst as modified by JDK teaches means for constructing (Factory interface) and means for sending (Put operation, send on a socket, pages 19-20) a datastream.

Borst as modified by JDK does not teach that the datastream constructed and sent is an active datastream which identifies executable code for processing the active datastream.

Sosic teaches stream operations, wherein a datastream is an active datastream (executable stream) which identifies executable code for processing (program counter evpc, event instruction evinst) the active datastream (process event in the execution stream). See pages 13-14, section 2.2. Given the teaching of Sosic, it would have been obvious to include an active datastream into the datastreams being sent across the network of Borst. A motivation to do so would have been to provide extensibility and adaptability (Sosic, dealing with dynamics of program execution, page 12, section 1) desirable in Borst (Borst, page 4, lines 27-31).

As to claims 9 and 10, note the respective rejections of claims 2 and 3 above.

As to claim 11, it is covered by claim 8 except for method for communicating. Borst clearly teaches communicating method (delivering and receiving) between computers (abstract).

As to claim 12, note the rejection of claim 2 above.

As to claim 13, note the rejection of claim 16 (receive mechanism).

As to claim 14, note the rejection of claim 6 above.

As to claim 15, note the rejections of claims 11-14. It is noted that an active datastream object identifying its datastream class would have been obvious based on object naming principle in object-oriented programming.

5. Applicant's arguments filed 4/7/2003 have been fully considered but they are not persuasive.

Regarding the argument that "nowhere does De Borst nor JDK teach or suggest intelligence within the datastream class that allow the instance to populate itself from information in the datastream" (remarks, page 9, 1st paragraph), the examiner respectfully disagrees. As discussed in detail in the rejection of claim 1, the argued intelligence, interpreted as the claimed datastream receive mechanism, is met by the readObject() method of JDK, which is within a parent datastream class (defined in the stream I/O class ObjecInput). See sections 1.3 and 1.6. In JDK, the datastream receive mechanism (readObject()) causes the newly created datastream object ('s') to populate itself by invoking the object's own method s.readObject() to read/obtain data from the received datastream (InputStream/FileInputStream). see section 1.3. Therefore, the combination of De Borst and JDK provides the argued intelligence within the datastream class that allow the instance to populate itself from information in the datastream. It is noted that the argued 'intelligence *within* the datastream class' is claimed as 'datastream receive mechanism *defined* in the datastream class' in the independent claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U S Pat. 5,327559 to Priven et al teaches deserializing (unflatten) a received stream object (CIP) to reconstruct the object using a method defined in a parent stream processing class (import process interface, col.s 13-14).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7238 for After Final communications, (703) 746-7239 for Official communications and (703) 746-7240 for Non-Official/Draft communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao
May 12, 2003

Sue Lao